

CLAIMS

What is claimed is:

1. A cannulated medical instrument for insertion of a medical device over a guide wire comprising:
 - a cannulated driver member configured to engage the medical device and insert the medical device at an insertion rate;
 - a cannulated follower member rotateably engaged with said cannulated driver member; and
 - a clasping device connected to said cannulated follower member, wherein said clasping device moves the guide wire distally away from said cannulated driver member at an extraction rate.

2. The medical instrument of Claim 1, further comprising a cannulated engaging member connected with said cannulated driver member, said cannulated engaging member configured to engage at least one of fasteners, reamers, and drill bits.
3. The medical instrument of Claim 1, wherein said cannulated follower is at least partially threaded with an instrument thread pitch.
4. The medical instrument of Claim 3, wherein an interior bore of the cannulated driver is threaded and configured to rotateably engage with said cannulated follower.
5. The medical instrument of Claim 4, wherein said cannulated follower is configured to move distally away at said extraction rate from said cannulated driver when said cannulated driver is rotated about said cannulated follower.
6. The medical instrument of Claim 5, wherein the medical device is at least partially threaded with a device thread pitch.
7. The medical instrument of Claim 6, wherein said insertion rate is equal to said extraction rate when said instrument thread pitch is equal to said device thread pitch.

8. The medical instrument of Claim 6, wherein said insertion rate is greater than said extraction rate when said instrument thread pitch is greater than said device thread pitch.
9. The medical instrument of Claim 6, wherein said insertion rate is less than said extraction rate when said instrument thread pitch is less than said device thread pitch.
10. The medical instrument of Claim 3, wherein said clasp device is engaged to said cannulated follower member and translates axially in response to rotation of said cannulated follower member.
11. The medical instrument of Claim 10, wherein said clasp device holds the guide wire rotationless when the driving member and following member rotate.
12. The medical instrument of Claim 11 wherein said clasp device is configured to move distally away at said extraction rate from said cannulated driver when said cannulated driver is rotated.
13. The medical instrument of Claim 12, wherein the medical device is at least partially threaded with a device thread pitch.

14. The medical instrument of Claim 13, wherein said insertion rate is equal to said extraction rate when said instrument thread pitch is equal to said device thread pitch.
15. The medical instrument of Claim 14, wherein said insertion rate is greater than said extraction rate when said instrument thread pitch is greater than said device thread pitch.
16. The medical instrument of Claim 15, wherein said insertion rate is less than said extraction rate when said instrument thread pitch is less than said device thread pitch.
17. The medical instrument of Claim 1, wherein said clasp device is configured to hold the guide wire rotationless and in a neutral position while the cannulated driver member rotates.
18. The medical instrument of Claim 1 wherein the cannulated driver member is hand-driven.
19. The medical instrument of Claim 1, wherein the cannulated driver member is connected to a drive motor.

20. The medical instrument of Claim 19, wherein the driver motor comprises one of an electric motor and a pneumatic motor.

21. A cannulated driver for driving a fastener over a guide wire comprising:
- a cannulated follower member rotateably engaged with the cannulated driver; and
 - a clasping device connected to said cannulated follower member, wherein said clasping device moves the guide wire distally away from said cannulated driver member at an extraction rate.

22. The cannulated driver of Claim 21, wherein said cannulated follower is at least partially threaded with an instrument thread pitch.
23. The cannulated driver of Claim 22 wherein the fastener is at least partially threaded with a device thread pitch.
24. The cannulated driver of Claim 23, wherein an insertion rate of the fastener is equal to said extraction rate when said instrument thread pitch is equal to said device thread pitch.
25. The medical instrument of Claim 21, wherein said clasp device is configured to hold the guide wire rotationless and in a neutral position while the cannulated driver member rotates.

26. A method for using a cannulated driver for driving a fastener over a guide wire comprising:

providing a follower member rotateably engaged with the cannulated driver;

securing a clasping device connected to the guide wire;

rotating the driver, wherein the fastener is inserted into the bone upon rotation of the driver; and

maintaining the guide wire in an axially and rotationally neutral position.

27. The method as defined in Claim 26, further comprising rotating the driver with a drive motor.
28. The method as defined in Claim 26, further comprising rotating the driver by hand.
29. The method as defined in Claim 26, further comprising securing the clasp device to the guide wire by rotating a thumb screw.
30. The method as defined in Claim 26, further comprising maintaining the guide wire in an axially and rotational movable position by axially moving the driver relative to the follower member.

31. A method for using a cannulated driver for driving a fastener over a guide wire comprising:

providing a follower member rotateably engaged with the cannulated driver;

securing a clasping device connected to the guide wire;

rotating the driver at an insertion rate, wherein the fastener is inserted into the bone upon rotation of the driver; and

extracting the guide wire at an extraction rate; and

maintaining the guide wire in a rotationally neutral position.

32. The method as defined in Claim 31, wherein the extraction rate is one of greater than, less than, or equal to the insertion rate.
33. The method as defined in Claim 31, further comprising rotating the driver with a drive motor.
34. The method as defined in Claim 31, further comprising rotating the driver by hand.